

BEST AVAILABLE COPY

WHAT IS CLAIMED IS:

1. A method of interfacing navigation operations, comprising:

 using a portable electronic device having a navigation library operable to be accessed on the portable electronic device;

 processing an application on the portable electronic device, wherein the navigation library is interfaced to the application; and

 acquiring navigation data by processing the application, wherein at least a portion of the navigation data identifies a present position associated with the portable electronic device, and the present position is used to produce results necessary for further processing of the application.
2. The method of claim 1, wherein in using the portable electronic device, the portable electronic device is at least one of a personal digital assistant and a cellular phone.
3. The method of claim 1, wherein in using the portable electronic device, the portable electronic device is global positioning system enabled.
4. The method of claim 1, wherein in acquiring the navigation data, the produced results communicate at least one of routing features, mapping features, and guidance features which are communicated on a display associated with the portable electronic device.

BEST AVAILABLE COPY

5. The method of claim 4, wherein in acquiring the navigation data, the produced results are communicated visually or audibly on the portable electronic device.
6. The method of claim 1, wherein in processing the application, the navigation library includes at least one of navigation modules, routing modules, mapping modules, guidance modules, compass modules, and gyro modules.
7. The method of claim 1, wherein in using the portable electronic device, at least a portion of the navigation library is remotely accessed by the application.
8. A navigation application programming interface (API) library, comprising:
 - a positioning module associated with determining a geographic position of a portable electronic device;
 - a guidance module associated with providing guidance information;
 - a routing module associated with providing route information; and
 - wherein the modules are accessible to one or more customized applications operating on the device.
9. The API library of claim 8, further comprising at least one of:
 - a mapping module associated with providing mapping information;
 - a compass module associated with providing magnetic information;
 - a barometer module associated with providing pressure and temperature information; and

BEST AVAILABLE COPY

a gyro module associated with providing direction and bearing information.

10. The API library of claim 8, wherein the positioning module interfaces with a global positioning satellite receiver in communication with the device.

11. The API library of claim 8, wherein the API library is at least one of a dynamic linked library and a shared library.

12. The API library of claim 8, wherein the guidance module is interfaced to an audio device in communication with the device to provide audible navigation guidance.

13. The API library of claim 8, wherein a number of the modules reside on a removable computer readable medium in communication with the device.

14. A navigation interface system, comprising:

a portable electronic device;

an application module customized to operate on the device;

a navigation library having navigation modules, guidance modules, mapping modules, and routing modules; and

wherein the application module selectively interfaces with at least one of the navigation modules, the guidance modules, the mapping modules, and the routing modules.

BEST AVAILABLE COPY

15. The system of claim 14, wherein the portable electronic device is at least one of a personal digital assistant and a cell phone.
16. The system of claim 14, wherein the navigation library is remote from the device.
17. The system of claim 14, wherein the navigation library further includes compass modules, barometer modules, and/or gyro modules.
18. The system of claim 14, wherein at least a portion of the navigation library resides on a removable computer readable medium.
19. The system of claim 14, wherein the mapping modules include at least one of a draw map operation, an overlay operation, a set scale operation, and a set zoom operation.
20. The system of claim 14, wherein the routing modules include at least one of a generate route operation, a get estimated time of arrival operation, and a get elapsed time to destination operation.